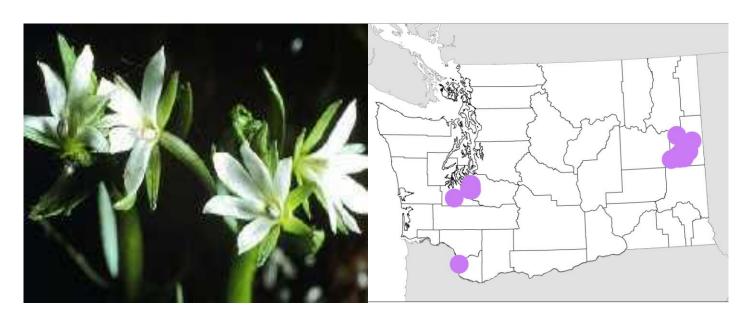
Species Fact Sheet Water Howellia Howelia aquatilis



STATUS: THREATENED CRITICAL HABITAT: NONE

Water howellia may occur in these Washington counties: Clark, Spokane, Mason, Thurston, and Pierce.

(Map may reflect historical as well as recent sightings)

Water howellia, *Howelia aquatilis*, was federally listed as threatened without critical habitat in 1994. A draft recovery plan for this species was prepared in 1996.

Current and Historical Status

Historically, water howellia has been collected (voucher specimens in herbariums) from Oregon, Idaho, Washington, and California. Currently this species is known to occur sporadically in Washington, Idaho, Montana, and California. Numerous attempts to relocate this species in Oregon have been unsuccessful, thus the species is considered extirpated from the state.

In Washington, water howellia currently comprises 33% of the rangewide total. This species occurs in Spokane, Clark, and Pierce counties. Water howellia is known from the lowlands west of the Cascade Mountains and the forested portions of the channeled scablands of eastern Washington.

It was first collected in 1937 in Thurston and Mason Counties and went uncollected for over 40 years. In 1978 it was found in Spokane and discovered, in 1980, in the Ridgefield National Wildlife Refuge in Clark County. In 1994 this species was discovered in two locations in Pierce County.

Description and Life History

Water howellia is an annual aquatic species in the bellflower family, Campanulaceae. This plant grows 4-24 inches high and has extensively branched, submerged or floating stems and narrow, linear, alternate (sometimes opposite) leaves up to 2 inches in length. Water howellia usually flowers in May and June, with small trumpet-shaped blooms ranging from white to light purple in color, at or above the water surface. There may also be small axillary flowers beneath the water surface. Water howellia reproduces only by seed which germinates when ponds dry during fall. This results in annual variability in population size depending on the extent of the previous season's drying.

Habitat

In Washington *H.aquatilis* occurs in three different landscape settings. A major of the occurrences are in small, ephemeral wetlands found within the forested portions of the channeled scablands of the extreme eastern edge of the state. The dominant tree species in these areas is ponderosa pine, although all of the wetlands have a broadleaf deciduous component. In Pierce County, the sites are all located in the Puget Trough lowlands, bordered by Douglas-fir dominated forests. These wetlands all have a significant Oregon ash component. In Clark County, this species occurs in a mosaic of wetlands and Oregon ash and Oregon white oak communities in the floodplain of the Columbia River.

Associated species within all Washington sites are similar and include blister sedge, *Carex vesicaria*, water parsnip, *Sium suave*, water starworts, *Callitriche spp.*, water buttercup, *Ranunculus aquatilis*, greater creeping spearwort, *R. flammula*, yellow water buttercup, *R. flabellaris*, horsetail, *Equisetum fluviatile*, and bur-reed, *Sparganium sp.*

Reasons for Decline

Water howellia and its habitat have been, and continue to be, threatened by a number of human-related factors, including, urbanization, timber harvest activities, livestock grazing, road construction, and conversion of habitat to other uses. Channelization and construction of dams along the Columbia river have led to loss of suitable wetland habitats. Wetland succession, and encroachment by non-native plants such as reed canarygrass, *Phalaris arundinaceae*, and purple loosestrife, *Lythrum salicaria*, have also contributed to the decline of this species

Conservation Efforts

USFWS has completed a conservation easement through the Partners program. This easement will help protect and restore the plant.

Research has been conducted on the ecology and population biology of *H. aquatilis*, including effective methods of propagation, habitat enhancement, and reintroduction. The results of these studies may be used to direct the management of the species.

References and Links

USFWS Threatened and Endangered Species Profile
Listing Status 1994
Draft Recovery Plan 1996
WA Department of Natural Resources